

SITNIKOV, Gennadiy Dmitriyevich; DOBROZRACOV, Oleg Ivanovich;
SAZONTOV, Vitaliy Ivanovich; GUROV, S., red.; KUZNETSOVA, A.,
tekhn. red.

[The plant was helped by the foundry section] Zavodu pomog-
la sektsiia liteishchikov. Moskva, Mosk. rabochii, 1963. 71 p.
(MIRA 17:3)

DOBROZRAKOVA, N. I., GATIGRYAN, G. M. and STOMA, M. S.

"Discharging Viscous Petroleum Products Under Pressure", p 309, in the Monograph "Investigation and Use of Petroleum Products", edited by N. G. Puchkov, Gostoptekhnizdat, Moscow-Leningrad, 1950.

DOBROZRKOVA, N. I.

The storage of lubricants for industrial enterprises. Moskva, Gos. nauchno-tekhn. izd-vo
neftianoi i gorno-toplivnoi lit-ry, 1950. 401 p. (51-27937)

TJ1077.D66

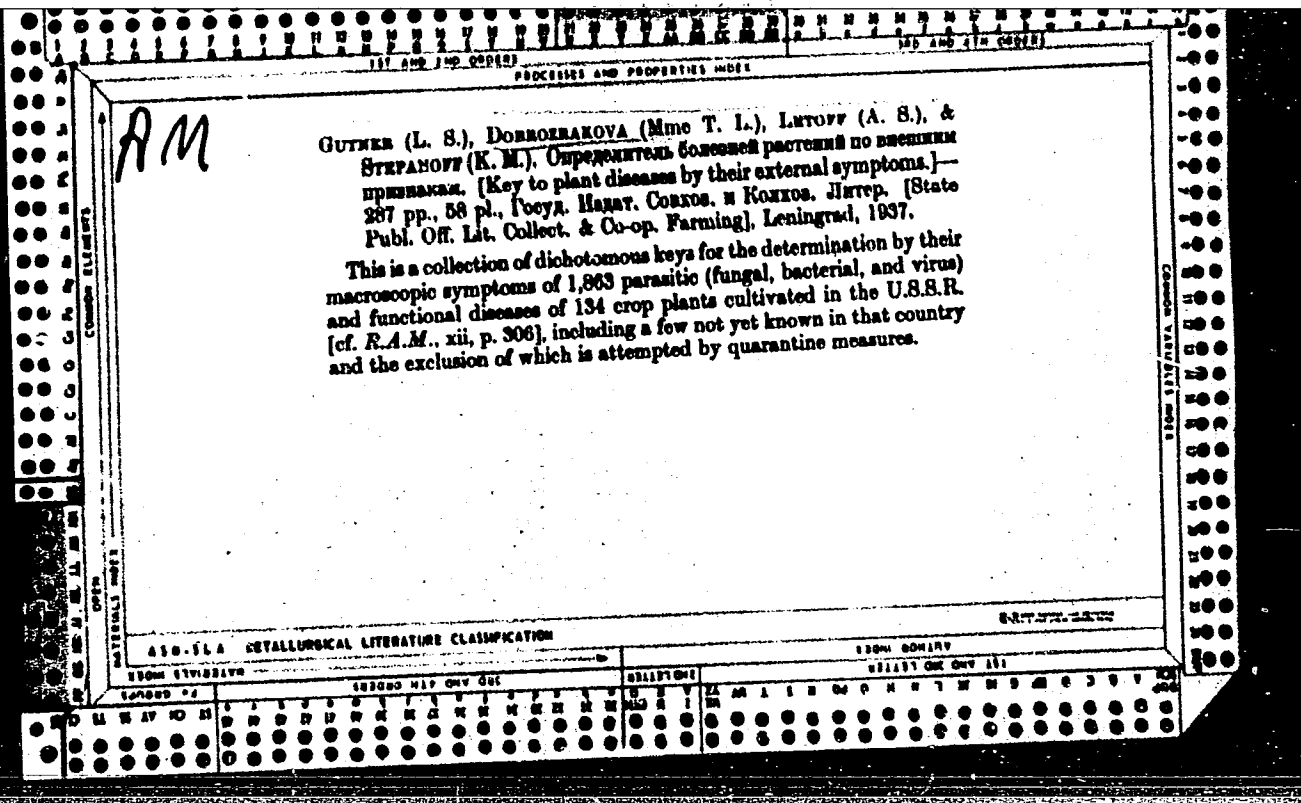
DOBROZRABEVA, N.).

Lubrication and fuel stocks: a reference book. Moskva, Gos. nauchno-tekhn. izd-vo
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TJ1075.D6

1ST AND 2ND ORDERS		PROCESSING AND PROPERTY MODEL		1ST AND 2ND COPIES	
<i>h m</i> BUDRINA (Mme A. P.), DOBROZEMSKAYA (Mme T. L.), KARAKULIN (B. P.), NAOUMOFF (N. A.), RUDENKO (D. K.), STEPANOFF (K. M.), TVERSKOV (D. L.), TUPINEVITCH (S. M.), & KHETAGUROVA (Mme F. V.). Фитопатология [Phytopathology.]—340 pp., 132 figs., 1 graph, 5 maps, Госуд. Науч. Колл.-совх. Изд-во. [State Publ. Off. Lit. Collect. & Co-op. Farming], Leningrad, 1935. This is a somewhat elementary manual of phytopathology intended for students at the Russian agricultural schools and experimental stations, the separate chapters of which are compiled by one or other of the authors specializing in the subject treated, under the general editorship of Professor Naoumoff. The first part gives the general principles of diagnosis of physiological, parasitic, and virus diseases of plants, with morphological and taxonomic accounts of the causal organisms or agencies, and a brief discussion of plant immunity from disease. The second and third parts give a somewhat fuller account of the more important diseases of the chief crops cultivated in U.S.S.R. [exclusive of ornamental plants and forest trees], and the fourth deals with control methods, including the phytopathological examination of seeds and their disinfection.					
ASS. S.L.A. METALLURGICAL LITERATURE CLASSIFICATION					
1ST AND 2ND ORDERS		1ST AND 2ND COPIES		1ST AND 2ND COPIES	
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1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
CR										Bitumen as a remedy for the control of pests and diseases of vegetable crops. B. A. Bryantsev, T. L. Dotsynskaya, M. K. Znamenskaya and A. I. Maslits. <i>Plant Protection</i> (U. S. S. R.) No. 8, 18-24(1930).—An aq. emulsion of bitumen (50%) was successfully used as a wetting agent without detriment to the plants. A. A. P.									
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ASB-11A METALLURGICAL LITERATURE CLASSIFICATION																			
REGIONAL DIVISION										REGIONAL DIVISION									
GROUPS										GROUPS									



1. SHCHEGOLEV, V. N., DOEROZRAKOVA, T. L.
2. USSR (600)
7. Zashchita Polevykh i Ovoshchnykh Kul'tur ot Vreditel'ey i Bolezn'ey. (Ucheb. Posobiye) (Protecting Field and Vegetable Crops from Pests and Diseases. (Training Manual)), 80 pp, Moscow-Leningrad, 1951.
9. Mikrobiologiya, Vol XXI, Issue 1, Moscow, Jan-Feb 1952, pp 121-132. Unclassified.

DOBROZRKOVA, T. L.

Bryantsev, D. A., and Dobrozrakova, T. L.: Laboratorno-
prakticheskie issledovaniya po razvitiyu i vreditel'
boleznei (Practical Laboratory Studies on Protection of
Plants from Pests and Diseases). Moscow: Sel'khozgiz.
1953. 244 pp. 6R. 75Kp. Reviewed in *Zemledelie*
1953, 127.

BRYANTSEV, Boris Aleksandrovich; ~~DOBROZRKOVA~~, Taisiya Leonidovna;
OSMOLOVSKIY, G.Ye., redaktor; ~~CHUMAYEVA~~, Z.V., ~~tekhnicheskii~~
redaktor

[The protection of plants from pests and diseases] Zashchita
rastenii ot vreditel'ei i boleznei. Izd. 4-oe, perer. i dop.
Moskva, Gos. izd-vo selkhoz. lit-ry, 1956. 580 p. (MIRA 10:1)
(Plants, Protection of)

DOBROZRAKOVA, T.I.; LETOVA, M.F.; STEPANOV, K.M.; KHOZHRYAKOV, M.F.,
doktor biologicheskikh nauk; AKHREMOVICH, M.B., redaktor;
OSMOLOVSKIY, G.Ye., redaktor; CHUNAYEVA, Z.V., tekhnicheskij
redaktor

[Catalog of plant diseases] Opredelitel' bolezhei rastenii. Pod red.
M.K.Khokhria'kova. Moskva, Gos. izd-vo sel'khoz. lit-ry, 1956. 661 p.
(Plant diseases) (MLRA 10:3)

DOBROZRAKOVA, Taisiya Leonidovna.

[Laboratory work in phytopathology] Laboratornye zaniatiia po
fitopatologii. 2.izd. Moskva, Gos. izd-vo sel'khoz. lit-ry,
1958. 49 p. (MIRA 11:9)
(Plant diseases--Laboratory manuals)

DOBROZRKOVA, Taisiya Leonidovna.; AKHREMOVICH, M.B., red.; NOLODTSOVA,
N.G., tekhn. red.

[Laboratory exercises in phytopathology] Laboratornye zaniatiia
po fitopatologii. Izd. 2. Moskva, Gos. izd-vo sel'khoz. lit-ry,
1958. 223 p. (MIRA 11:11)
(Plant diseases)

BRYANTSEV, Boris Aleksandrovich; DOBROZRAKOVA, Taisiya Leonidovna;
AKHREMOVICH, M.B., red.; CHUNAYEVA, Z.V., tekhn.red.

[Protecting plants from pests and diseases] Zashchita rastenii
ot vreditel'ei i boleznei. Moskva, Gos.izd-vo sel'khoz.lit-ry,
1958. 411 p. (MIRA 12:3)
(Plant diseases) (Agricultural pests)

DOBROZRKOVA, T.L.

Laboratorno-Prakticheskiye Zanyatiya Po Zashchite Rasteniy Ot Vreditel'ey i Bolezny (by) B.A. Bryantsev i T.L. Dobrozrakova. 2. izd. Moskva, Leningrad, Sel'khozgiz, 1959.

254 p. illus., diags., tables.

VAKIN, A.T., prof.; GOLOVIN, P.N., prof., doktor biolog.nauk; DOBROZRKOVA, T.L., dotsent; ZHURAVLEV, I.I., doktor sel'skokhoz.nauk; POLYAKOV, I.M.; SOKOLOV, D.V., dotsent; STEPANOV, K.M., doktor biolog.nauk; TUPENEVICH, S.M., prof.; FEDORINCHIK, N.S., kand.sel'skhokhoz.nauk; FEDOTOVA, T.I., doktor sel'skokhoz.nauk; KHOKHRYAKOV, M.K., doktor biolog.nauk; CHIGAREV, G.A., kand.sel'skokhoz.nauk; YATSENKO, I.P., prof. [deceased]; REUTSKAYA, O.Ye., red.; CHUNAYEVA, Z.V., tekhn.red.

[A phytopathologist's dictionary - reference book] Slovar'-spravochnik fitopatologa. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1959. 414 p.
(MIRA 13:1)

1. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Polyakov).
(Plant diseases--Dictionaries)
(Russian language--Dictionaries)

BRYANTSEV, Boris Aleksandrovich; DOBROZRKOVA, Taisiya Leonidovna; REUTSKAYA,
O.Ye., red.; CHUNAYEVA, Z.V., tekhn. red.

[Protection of plants from diseases and pests] Zashchita rastenii ot
vreditel'ei i boleznei. Izd. 5., pererab. i dop. Leningrad, Gos. izd-vo
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(Plants, Protection of)

BRYANTSEV, Boris Aleksandrovich, kand. sel'khoz. nauk; DOBROZRKOVA,
Taisiya Leonidovna, kand. sel'khoz. nauk; DMITRIYEV, N.N.,
red.; SHERMUSHENKO, T.A., tekhn. red.

[Controlling the pests and diseases of farm plants] Bor'ba s
vrediteliami i bolezniami sel'skokhoziaistvennykh rastenii.
Leningrad, Lenizdat, 1962. 129 p. (MIRA 15:5)
(Plants, Protection of)

BRYANTSEV, Boris Aleksandrovich; DOBROZRKOVA, Taisiya Leonidovna;
MINKINA, L.N., red.; BARANOVA, L.G., tekhn.red.; FRIDMAN, Z.L.,
tekhn.red.

[Protection of plants against pests and diseases] Zashchita
rastenii ot vreditel' i boleznei. Moskva, Sel'khozizdat,
1963. 503 p. (MIRA 17:1)

(Plants, Protection of)

GOLOVIN, P.N.; BONDARTSEV, A.S.; KHOKHRYAKOV, M.K.; DOBROZRKOVA, T.L.; TROPOVA, A.T.; CHEREPANOVA, N.P.

Activities of the Mycological Section of the All-Union Botanical Society for the period January 1963-July 1964. Bot.zhur. 49 no.11: 1688-1692 N '64. (MIRA 18:1)

1. Vsesoyuznoye botanicheskoye obshchestvo

DOBROZRKOVA, T.L.; KARPOVA-BENUA, Ye.I.

Pedagogical activities of A.A. Iachevskii. Trudy VIZR no.23:
112-117 '64. (MIRA 19:2)

DOBRSKI, J.

"Aparaty elektromedyczne" (Electromedical apparatus), by J. Dobrski. Reported in New Books (Nowe Książki), No. 11, June 1, 1956.

CZECHOSLOVAKIA

~~E. DOBRU~~ and M. HRUBISKO, Institute of Hematology and Blood Transfusion (Ustav hematologie a krevni transfuze) Chief (reditel) Prof Dr J. HOREJSI, CSc, Prague; and Faculty Transfusion Station (Fakultni transfuzni stanice) Head (vedouci) Docent Dr M. HRUBISKO, CSc, Bratislava.

"Hemotherapy of Hypocoagulation Conditions."

Prague, Casopis Lekarů Ceských, Vol 102, No 20, 17 May 63; pp 91-99 of separately paginated section "Medical Sciences Abroad" (Lekarska veda v zahraničí).

Abstract : Review of laboratory and clinical publications on fibrinogen, prothrombin, Factor V - proaccelerin - labile factor; Factor VII - proconvertin; Factor VIII -AHG; Factor IX - PTC - Christmas - hemophilia Factor B - Factor X Stuart - Prower; Factor XI - PTA; Factor XII - Hageman in stored blood and in various clinical syndromes as reported in 8 Soviet, 10 Polish, 19 Czech (incl. 1 pers. communication) and 200 Western references.

1/1

LEMANCZYK, Konrad, dr; DOBRUCKA, Irena, mgr inz.

Chemical scientific and research institutes in some Western European countries. Chemik 15 no.5:162-166 My '62.

LAPINSKA, Jozefina; oraz wspolpracownicy: BANASZKIEWICZ, Halina;
STALINSKA, Elzbieta; DOBRUCKA-KOKINSKO, Ewa; KALINOWSKI, Jan;
KROSNIAK, Franciszka; GWOZDZ, Jozef; LUTZ, Hanna; LUTZ, Jerzy;
DWORAK, Wlodzimierz; NARUSZEWICZ, Wanda

The efficiency of occupational rehabilitation in sanatoria
for young people. Gruzlica 33 no.4:323-332 Ap '65.

1. Z Zespołu Nadzoru Specjalistycznego Instytutu Gruzlicy
(Kierownik: lek. A. Kwiekowa) (for Lapinska). 2. Sanatorium
w Lagiewnikach (for Banaszkiewicz, Stalinska). 3. Sanatorium
im. Okrzei w Otwocku (for Dobrucka-Kokinsko, Kalinowski).
4. Sanatorium w Istebnej (for Krosniak, Gwozdz). 5. Sanatorium
w Dziekanowie Lesnym (for H. Lutz, J. Lutz). 6. Sanatorium w
Dzierzaznie (for Dworak, Naruszewicz).

DO BRUCKI, Roman; MASIAKOWSKI, Jerzy

Durability of anhydrous lanolin. *Farmacja Pol* 19 no. 21/22:437-440
25 N '63.

1. Institute of Applied Pharmacy, School of Medicine, Poznan.
Head: Doc. dr R. Adamski.

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Use of infrared rays in the reduction of peroxides in Adeps
lenae anhydr. Farmacja Pol 20 no. 5/5-164-166 25 Mr '64.

1. Institute of Applied Pharmacy, School of Medicine, Poznan,
Head: Doc. dr R. Adamski.

ROWINSKA, Ewa; LACHOWICZ, Danuta; NIEMIROWSKA, Hanna; DOBRUCKI, Ryszard;
JAROSINSKA, Boguslawa; PIOTROWSKI, Andrzej; STRZALKOWSKI, Jerzy;
WLODARCZYK, Krystyna; ZGLINSKA, Barbara

Causes of mortality among tuberculous patients and causes of unfavorable course in tuberculosis (according to data on the mortality of Warsaw inhabitants during 1959). Gruzlica 29 no.9:785-796 S '61.

1. Z Instytutu Gruzlicy w Warszawie Dyrektor: prof. dr med.
W. Jaroszewicz.

(TUBERCULOSIS statist)

DOBRUCFI, W.

Plastic Bearings in Rolling Mills

Source - PRZEGŁAD MECHANICZNY (Mechanical Engineering Review) Poland
Vol. XII, No. 10 October 1953, pp. 339-370

DOBROCKI, W.

POL.

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Sobkowiak J., Dobrucki W., Plastic Rolling Mill Bearings,
„Łożyska wałownicze z tworzyw plastycznych”. Przegląd Mecha-
niczny, No. 11, 1953, pp. 394-399, 13 figs., 1 tab.

The role and importance of using plastic bearings in rolling mills
as a means of effecting substantial savings both in non-ferrous metals
and alloys and in operating costs. The authors deal with the chief phe-
nolic plastics (textolite, textobakelite, lignofol) used in the manufac-
ture of rolling mill bearings, and with such properties of these bearings
as coefficient of friction, durability, power consumption, shape and size
of bushes, and bearing construction. Service and maintenance instruc-
tions for plastic bearings.

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DOBROUCKI, W.

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Sobkowiak J., Dobrucki W. Progress in Designing Rolling Mill Boxes. *Przegląd Mechaniczny*.
No. 7, 1954, pp. 208—211, No. 8, 1954, pp. 253—255, 15 figs.
A description of progress made in the design of rolling mill boxes by means of which plastic formation of metal is obtained by rolling. Two lines of development are distinguished in this description: 1) progress in the design of the box component parts and 2) advance in the way in which the rolls are arranged in a box. The up-to-date design of the roll mounting in the bearings, as well as the design of the bearings themselves, is considered in the first chapter. In the second, the modern crushing duo-rolls machines of large roll stroke (blooming-stabbing) are discussed, together with boxes of vertical rolls, and boxes of special design for small goods rolling mills and wire drawing mills. As regards up-to-date multi-roll machinery, Quarto-rolls and Szdzimir rolling mill are described.

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DOBRUCKI, W.

Influence of deformations of columns on the deformation of the frame
of a rolling machine during rolling.

p. 119
Vol. 21, no. 4, Apr. 1954
HUTNIK
Katowice

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 5, no. 2
Feb. 1956

DOBRUCKI, W.

TECHNOLOGY

PERIODICAL: HUTNIK, Vol. 25, no. 7/8, July/Aug. 1958.

DOBRUCKI, W. Determination of the degree of securing parts of rolling mills with pot-shaped iron safety pads. p. 284.

Monthly List of East European Accessions (EEAI) LC Vol. 8, No. 4 April, 1959, Unclass.

DOBRUCKI, Wladyslaw

The flow of metal during the hot push broaching process of pipes through roller cages. Problemy prof hut maszyn 10 no.8:221-234 Ag '62.

1. Akademia Gorniczo-Hutnicza, Krakow.

DOBRYCKI, W., doc. dr inz.; ZAPALOWICZ, W., doc. dr inz.

"Rolling mill and forging machines" by [prof. dr inz] A. Geleji.
2d ed., rev. and enl. Reviewed by W. Dobrucki and W. Zapalowicz.
Hutnik P 29 no.10:389-391 O '62.

DOBRUCKI, Wladyslaw; MORAWIECKI, Marian

Determination of the heating temperatures of roll table
mechanism parts of hot rolling mills. Problemy proj hut
maszyn 11 no.8:253-256 Ag '63.

1. Akademia Gorniczo-Hutnicza, Krakow.

DOBRUCKI, Wl., doc. dr inz.; ERHARD, S.P.P., B. Sc.

Progress in the technology of hot steel extrusion.
Hutnik P 30.no.11:359-367 N '63.

DOBRUCKI, Wladyslaw

Effectiveness analysis of building plants for hot extrusion of steel pipes and sections. Problemy prej hut maszyn 13 no.4: 109-114 Ap '65.

1. School of Mining and Metallurgy, Krakow.

BOLENTSKIY, N. [Dobinski, Wl.] dr., dotsent; ERKHARDT, J.P., inzh.

Development of the industry of hot pressing of pipe pipes
and section in the world. Izv. vys. ucheb. zav.; mashinostr.
no.9:178-202 '64. (MIRA 17:12)

1. Gorno-metallurgicheskaya akademiya, Krakov, Polska (for
Boleutskiy). 2. Levy Eng neering Company, Bournemouth, England
(for Erkhhardt).

DOBRUCKI, Wladyslaw

Scientific technological conference on improved processes of plastic treatment of metals. Wiad hut 21 no.1:30-31 Ja '65.

DOBRUNOV, A.G., doktor biologicheskikh nauk

"Physiology of drought resistance in arboraceous species of the Apsheron Peninsula" by B.Z.Guseinov. Reviewed by A.G.Dobrunov. Izv. AN Azerb. SSR. Ser. biol. i med. nauk no.6:159 '60.

(MIRA 14:9)

1. Chlen-korrespondent AN Kazakhskoy SSR.

(APSHERON PENINSULA--PLANTS, EFFECT OF ARIDITY ON)
(TREES) (SHRUBS) (GUSEINOV, B.Z.)

DOBRUNOV, D.I., inzh.

Device for measuring resistance of ground wires. Bezop.truda v prom.
5 no.6:26 Je '61. (MIRA 14:6)

(Electric meters)

DOBRUNOV, G.M.; SMIRNOVA, T.A.; BLINOV, A.N.; RUDKIN, A.G., konstruktor;
MIKHEYEV, V.P., konstruktor; MAL'TSEV, B.G., konstruktor; PETROV,
V.I., konstruktor; BASINKEVICH, I.R., red.i sd-va; SHIBLOVA, R.Ye.,
tekhn. red.

[Album of standard shielding and protecting devices for basic
types of sawmilling and woodworking equipment] Al'bom tipovykh
ograditel'nykh ustroystv i predokhranitel'nykh prispособlenii
dlia osnovnykh vidov lesopil'no-derevoobrabatyvalushchego oboru-
dovaniia. Moskva, Goslesbumizdat, 1963. 51 p. (MIRA 16:9)

1. Moscow. TSentral'nyy nauchno-issledovatel'skiy institut me-
khanicheskoy obrabotki drevesiny.
(Woodworking machinery--Safety measures)

DOBRUNOV, G.M.

Improving the shielding of belt and chain conveyors. Der.
prom. 12 no.8:14-15 Ag '63. (MIRA 16:11)

1. TSentral'nyy nauchno-issledovatel'skiy institut mekhanicheskoy obrabotki drevesiny.

DOBRUNOV, G.M.; KAMNEVA, G.I.

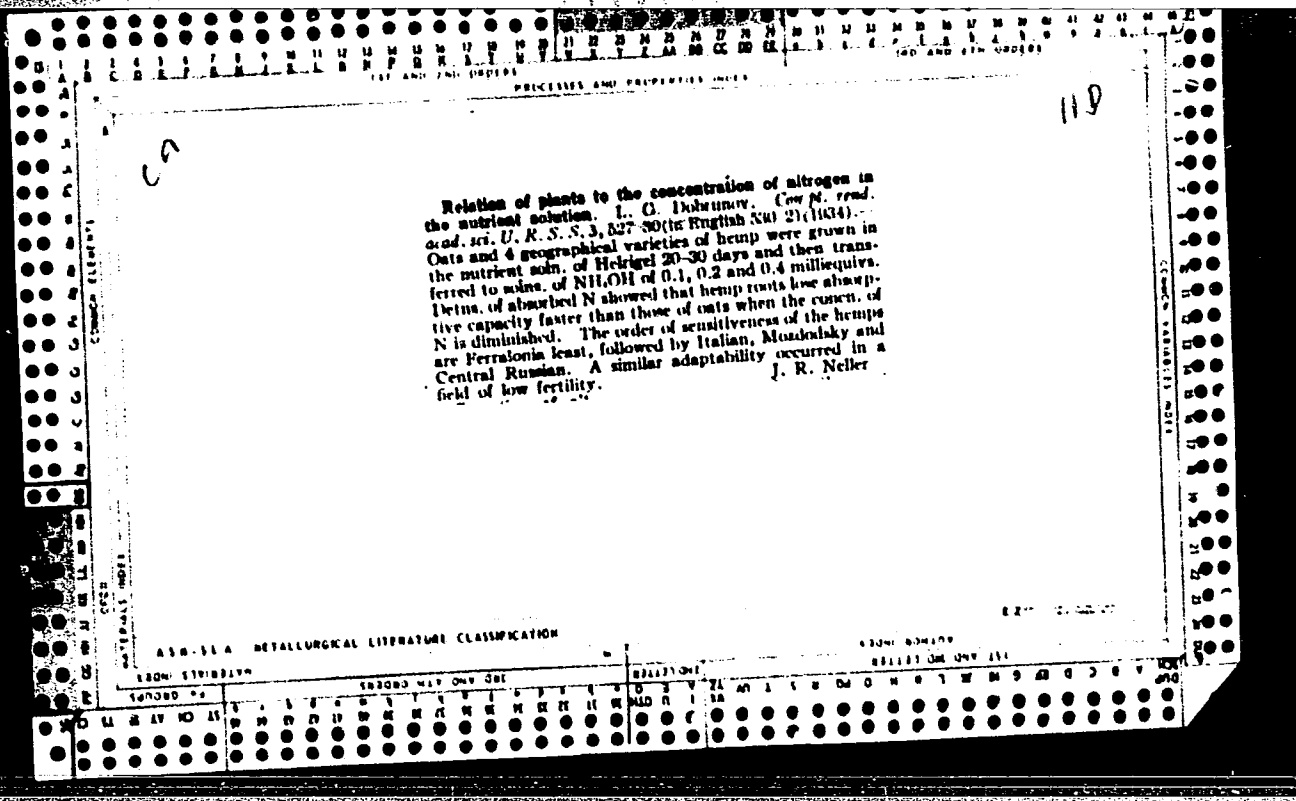
Increasing the efficiency of pneumatic conveyors at saw setting workshops. Der. prom. 12 no.10:23-24 0 '63. (MIRA 16:10)

1. TSentral'nyy nauchno-issledovatel'skiy institut mekhanicheskoy obrabotki drevesiny.

DOBRUNOV, Grigoriy Mikhaylovich; NIKITIN, L.I., red.

[Safety measures at a sawmill] Tekhnika bezopasnosti na
lesopil'nom zavode. Moskva, Izd-vo "Lesnaia promyshlen-
nost'," 1964. 156 p. (MIRA 17:5)

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
CA Growth peculiarities of hemp as a result of a lack of nutritive substances in the soils. L. G. Dobrunov. <i>Compt. rend. acad. sci. U. R. S. S. [N. S.]</i>, 1, 281-4 (in English 283-6) (1934).—In a poor soil flax uses up most N, P₂O₅ and K₂O; oats are second for K₂O, and hemp for N and P₂O₅. In a rich fertilized soil hemp uses up relatively most N and K₂O but least P₂O₅. F. H. Rathmann																			
COMMON ELEMENTS COMMON VARIABLES INDEX OPEN MATERIALS INDEX ASH-SEA METALLURGICAL LITERATURE CLASSIFICATION 18000 17000 16000 15000 14000 13000 12000 11000 10000 9000 8000 7000 6000 5000 4000 3000 2000 1000 0																			



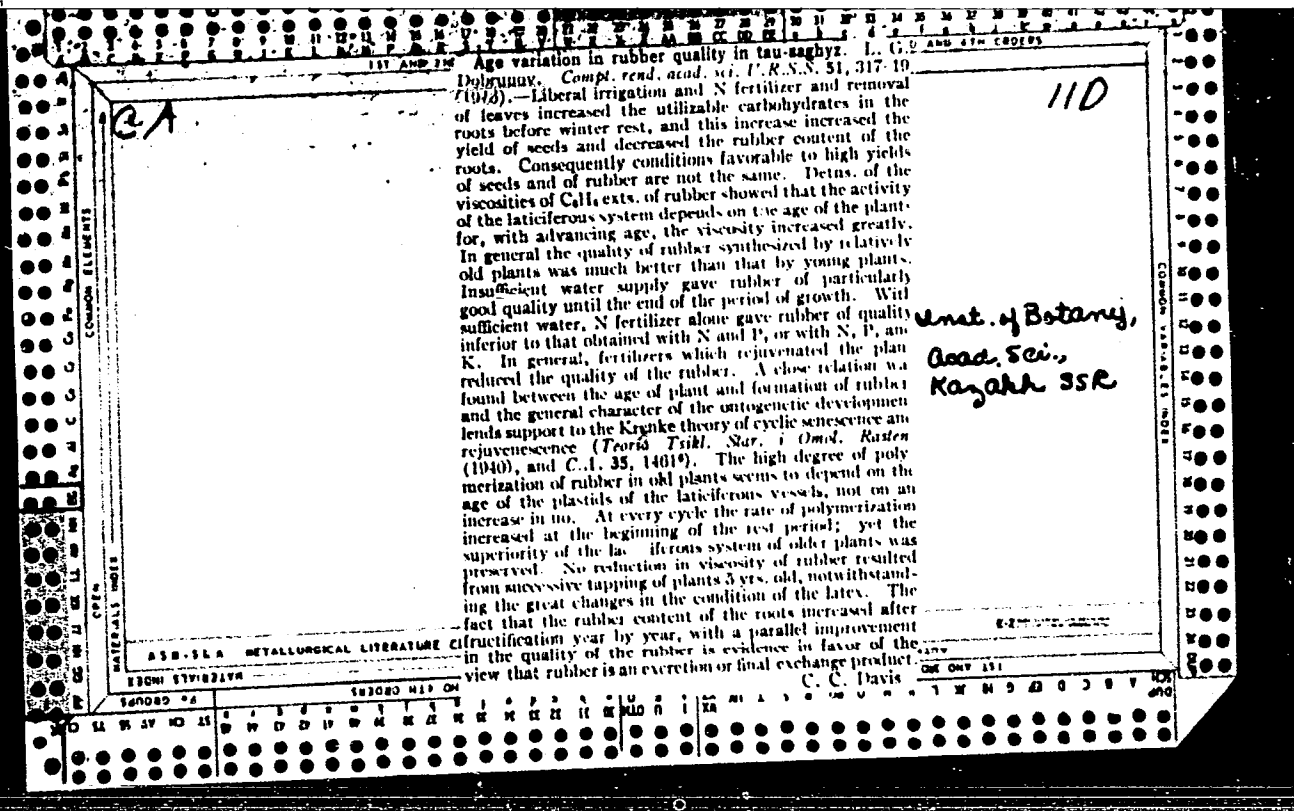
BC

PROCESSES AND PROPERTIES INDEX

A-4

Characteristics of the growth and mineral nutrition of hemp with simultaneously maturing male and female plants. I. G. DOPGUNOV (Compt. rend. Acad. Sci. U.R.S.S., 1937, 34, 321-324).— The increased productiveness of the new variety of hemp in which plants of both sexes mature simultaneously is partly accounted for by the greater growth, and better nutrition of the male plants. The root system of the new variety is more extensive and the mineral intake from the soil is accordingly greater. W. O. K.

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION



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CA

11-D

Physiology and biochemistry of plants in Kazakhstan.
[L. G. Dobrunov and T. B. Darkanbaev. *Izvst. Akad.
Nauk Kazakh. S.S.R., Ser. Fiziol. i Biokhim. Rastenii*,
No. 2, (Whole No. 39), 3-14(1947).—An extensive review
and summary. G. M. Kosolapoff

BA

HE

Qualitative differences between fruits from different parts of the crown of an apple tree. L. G. Podguzov and G. M. Gladysheva (Kirov Kazakh State Univ., Alma-Ata, U.S.S.R.). *Compt. rend. acad. sci. U.R.S.S.* 55, 631-4(1917)(in English). Differences were found between fruits relative to the order of ramification of the tree. Fruits of higher branches were in general of greater wt. and sugar content and lower acidity and ascorbic acid than those of lower branches. It follows that the fruits on higher branches attain maturity earlier except for fruits on the youngest parts of the tree in which maturity is slightly delayed. Development of fruits was not interrupted by their severance from the tree and compositional changes continued in the same direction during storage and continued to show the influence of order of ramification. J. T. S.

ASSN. & A. DETAILING LITERATURE CLASSIFICATION

STONY BROOK LIBRARY

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DOBUNOV, L. G.

Dobrunov, L. G. - "Peculiarities of plants bearing rubber in their roots in the
activity of certain ferment systems,"
Vestnik Akad. nauk Kazakh. SSR, 1948, No. 12, p. 92-95

So: U-3566, 15 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 13, 1949)

DOBRUNOV, L. G.

"Changes in Physiological and Biochemical Characteristics in the Ontogenesis of Cultivated Plants." Sub 23 Mar 51, Inst of Plant Physiology imeni K. A. Timiryazev.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

^G
DOBRUNOV, L.S.

Certain principles of the growth cycle theory. Usp.
sovrem. biol. 32 no.1:101-112 July-Aug 1951. (CML 20:11)

1. Alma-Ata.

1. DOBRUNOV, L.G.
2. USSR (600)
4. Agriculture
7. Biology of tausagyz. Alma-Ata, Kazgosizdat, 1952

9. Monthly List of Russian Accessions, Library of Congress, February, 1953. Unclassified

9

1. DOBRUNOV, L.G.; GLADYSHEVA, O.M.; LUKICHEVA, Ye.L.
 2. USSR (600)
 4. Afforestation - Aral Sea Region
 7. Accelerating the growth of trees during afforestation of the dunes in the Northern Aral Sea Region, L.G. Dobrunov, O.M. Gladysheva, Ye. L. Lukicheva, Vest.AN Karakh. SSR no. 4, 1953.
9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953. Unclassified.

DOBRUNOV, L.G., doktor biologicheskikh nauk.

Meeting on the coordination of scientific activity of the academies
of sciences of union republics on the problem of productivity. Vest.
AN Kazakh SSR 11 no.4:124-126 Ap '54. (MLRA 7:5)
(Agricultural research)

DOBRUNOV, L. G.

USSR/ Agriculture

Card 1/1 Pub. 123 - 4/11

Authors : Dobrunov, L. G., Memb, Corresp. of Acad. of Sc. Kaz-SSR

Title : Agrophysiological bases for the obtainment of high and stable spring wheat crops from the virgin soil of the arid lands of Kazakhstan

Periodical : Vest. AN Kaz. SSR 2, 38 - 48, Feb 1955

Abstract : The agrophysiological requirements for the obtainment of large spring wheat crops from the virgin soils of the arid Kazakhstan regions are discussed and the climatic conditions of these soils are described. Nineteen USSR references (1940 - 1954).

Institution:

Submitted:

DOBRUNOV, Leonid Georgiyevich

[Physiological changes in the ontogenesis of plants] Fiziologicheskie izmeneniia v ontogeneze rastenii. Alma-Ata, Izd-vo Akademii nauk Kazakhskoi SSR, 1956. 250 p. (MLRA 9:8)
(Botany--Physiology)

IDLIS, G.; DOBRUNOV, L. G.

"Trudy" of the Astrobotany Sector of the Academy of Sciences of the
Kazakh SSR. Volumes 3 and 4. Reviewed by G. Idlis. L. Dobrunov. Astron.
zhur. 33 no.4:635-639 J1 - Ag '56. (MLA 9:11)
(Mars--Spectra) (Plurality of worlds)

14-4

USSR/Cultivated Plants - Grains.

Abs Jour : Ref Zhur - Biol., No 9, 1958, 39198

Author : Dobrunov, L.G., Gladysheva, O.M., Starkova, A.V.,
Polinbetova, F.A., Taranov, O.N.

Inst : Institute of Botany, Academy of Sciences Kazakh SSR

Title : Increase in Drought Resistance and Yield Capacity of
Wheats in the New Land Reclamation Zone of Northern
Kazakhstan.

Orig Pub : Fiziol. rasteniy, 1957, 4, No 2, 205-208.

Abstract : The increase in wheat drought resistance by using B, gra-
nulated Pc and by hardening seeds against drought before
sowing (drying the seeds and treating them by calcium
chloride) was studied by the Institute of botany of the
AN Kazakh SSR. The method which was studied has brought
about important changes in physiological processes

Card 1/2

- 28 -

M

Country : USSR
Category: Cultivated Plants. Commercial. Oil-Bearing.
Sugar-Bearing.

Abs Jour: RZhBiol., No 22, 1958, No 100397

Author : Dobrunov, L.G.; Bukreyeva, N.Ye.
Inst : Inst of Botany, AS Kazakh SSR
Title : Characteristics of the Growth and Quality
Indicators in Sugar Beet Roots Under the
Conditions of New Methods of Cultivation.

Orig Pub: Tr. In-ta botan. AN kazSSR, 1957, 5, 210-220

Abstract: A study of the square-pocket, square and
drill sowings of sugar beets showed that with
an increase in the bed, the vigor of the growth
and physiological processes heighten: the
intensity in the growth of the assimilative

Card : 1/3

M-124

M

Country : USSR
Category: Cultivated Plants. Commercial. Oil-Bearing.
Sugar-Bearing.

Abs Jour: RZhBiol., No 22, 1958, No 100397

surface of the leaves, and the weight of the blade and the petiole increase, the conditions of water supply in the plants improve, the concentration of cell sap becomes lower, photosynthesis intensifies and the chlorophyll content rises. During this, the mass of the root increases but its ripening is retarded, which leads to a lowering in the sugar content, an increase in the content of harmful N, insoluble pectins, and ash. Raising the quality of the roots is possible by means of efficient feeding and water supply. Under the conditions of the southern zone of beet growing in Kazakhstan,

Card : 2/3

Country : USSR

M

Category: Cultivated Plants. Commercial. Oil-Bearing.
Sugar-Bearing.

Abs Jour: RZhBiol., No 22, 1958, No 100397

the phosphoro-potassium nutrition of the beets should be intensified in the second half of vegetation together with an adequate supply of all nutrients, especially N, in the first half. In the pre-harvest period, it is necessary to reduce water supply in order to stop the growth of the leaves, but one should not permit their premature wilting. -- G. Yu. Dinesman

Card : 3/3

M-125

DOBRUNOV, I. G.

Basic problems awaiting the plant physiologists of Kazakhstan
and measures for their solution. Vest. AN Kazakh. SSR 13 no.3:
24-29 Mr '57. (MLA 10:6)

1. Senior Correspondent Akademii nauk Kazakhskoy SSR.
(Kazakhstan-agricultural research)

PARAVYAN, A.V., kand.biolog.nauk; DOBRUNOV, I.G., doktor biolog.nauk;
DARKANBAYEV, T.B., professor; BARANOVSKIY, P.M.; MOSKVICHEVA,
L.N., red.; RZHONDEKOVSKAYA, L.S., red.; ROZOKINA, Z.P., tekhn.red.

[Proceedings of the Interrepublic Scientific Conference of Plant
Physiologists and Biochemists] Trudy Mezhrespublikanskoi nauchnoi
konferentsii fiziologov i biokhimikov rastenii. Alma-Ata, 1958.
203 p. (MIRA 12:2)

1. Mezhrespublikanskaya nauchnaya konferentsiya fiziologov i
biokhimikov rasteniy. Alma-Ata, 1956. 2. Institut botaniki AN
KazSSR (for Paravyan, Dobrunov, Darkanbayev). 3. Kazgosuniversitet
im. S.M. Kirova (for Darkanbayev). 4. Chlen-korrespondent AN
KazSSR (for Dobrunov, Darkanbayev).
(Biochemistry) (Botany--Physiology)

DOBRUNOV, L.G.
DOBRUNOV, L.G.

Work of plant physiologists in Kazakhstan. Fiziol. rast. 5 no.1:
95-96 Ja-F '58. (MIRA 11:1)
(Kazakhstan--Botanical research)

DOBRUNOV, L.G.

"Foliar feeding of plants" by F.F. Matskov. Reviewed by L.G.
Dobrunov. Fiziol. rast. 5 no.3:301-302 My-Je '58. (MIRA 11:6)
(Fertilizers and manures)
(Leaves)
(Matskov, F.F.)

DOBRUNOV, L.G.; PAKHOMOVA, L.M.; FAYZULLIN, A.D.

.Control of sugar beet growth and maturation under conditions of a shorter vegetation period. Fiziol. rast. 9 no.3:379-384 '62.

(MIRA 15:11)

1. Institute of Biology of Bashkirian Affiliate of U.S.S.R. Academy of Sciences, Ufa.

(Bashkiria--Sugar beets)

DOBRUNOV, L.G.; CHUMINA, O.T.

Ontogenetic and metamerio variation of the water balance in plants.
Izv. AN Kazakh SSR, Ser. bot. i pochv. no. 3:42-54 '62. (MIRA 15:12)
(Plants—Water requirements)

DOBRONOV, L.G.; YERGAZIYEVA, R.J.

Physiological characteristics of corn in wide-row cultivation of
a mixture of two varieties. Trudy inst. bot. AN Kazakh. SSR 20:36-40
'64. (MIRA 18:1)

DOBRUNOV, L.G.; CHUMINA, O.T.

Physiological differences in the leaf apparatus of the parent forms
and heterotic tobacco plants. Trudy Inst.bot.AN Kazakh.SSR 20:112-
127 '64. (MIRA 18:1)

DOBRUNOV, L.G.

Objectives of plant physiology in Kazakhstan. *Izv. AN Kazakh. SSR.*
Ser. biol. nauk 2 no.3:3-8 My-Je '64.

(MIRA 17:10)

YERGAZIYEVA, R.I.; DOBRUNOV, L.G.

Interrelationships between different corn varieties in mixed
planting. Izv. AN Kazakh. SSR. Ser. biol. nauk 2 no. 6:24-
29 N-D '64. (MIRA 18:3)

AZAROVA, M.M., dotsent, kand.ekon.nauk; BAUTINA, N.V., dotsent, kand.ekon.
nauk; DOBRUSHIN, I.M., kand.ekon.nauk; KOZODOYEV, I.I., doktor
ekonom.nauk, red.; GARSIA, L., red.; ASTAKHOV, V., red.; PROKOP'YEV,
S., red.; CHEPELEVA, O., tekhn.red.

[Reader in political economy] Khrestomatia po politicheskoi
ekonomii. Moskva, Izd-vo sotsial'no-ekon.lit-ry, 1960. 759 p.
(MIRA 13:12)

(Economics)

AZAROVA, M.M., kand. ekon. nauk, dots.; BAUTINA, N.V., kand. ekon. nauk, dots.; DOBRUSHIN, I.M., kand. ekon. nauk; MAKHON'KO, T.P., kand. ekon. nauk, dots.; TOLYPIN, Yu.M., kand. ekon. nauk, dots.; KOZODOYEV, I.I., doktor ekon.nauk, prof., red.; GARSIA, L., red.; MITINA, M., red.; DARONYAN, M., mladshiy red.; KRYLOVA, I., mladshiy red.; NOGINA, N., ~~tekhn.~~ red.

[Chrestomathy in economics] Khrestomatia po politicheskoi ekonomii. 2., perer. i dop. izd. Moskva, Sotsekgiz, 1963. 798 p.

(MIRA 16:4)

(Economics)

I 2551-66 EWP(d)/EWP(a)/EWP(v)/T/EWP(k)/EWP(l)/ETG(m) WW
 ACC NRI AP5027608 SOURCE CODE: UR/0135/65/000/011/0042/0044

AUTHOR: Brinberg, I. L. ^{44.55} (Candidate of technical sciences); Grudkin, D. A. (Engineer);
 Dobrushin, M. S. ^{44.55} (Engineer); Shakhnov, A. F. (Engineer) ^{44.55}

ORG: TsNIITMASH

TITLE: Standardized semiautomatic CO₂ shielded welding machines

SOURCE: Svarochnoye proizvodstvo, no. 11, 1965, 42-44

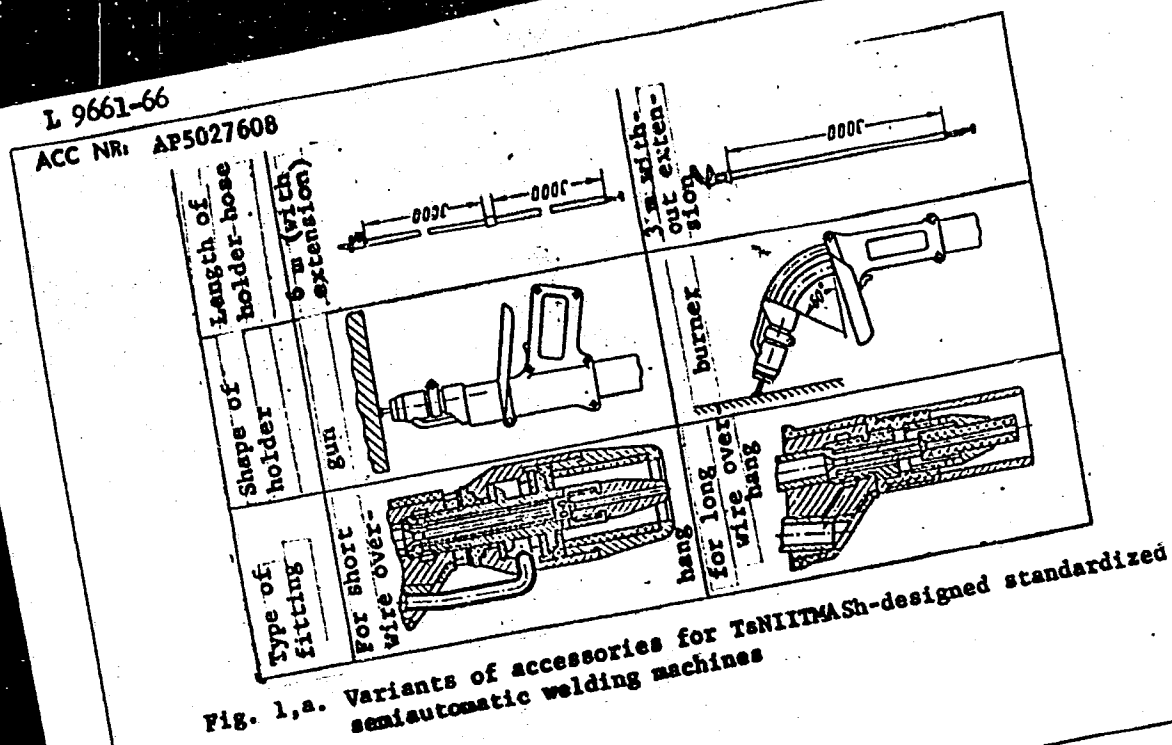
TOPIC TAGS: gas welding, arc welding, semiautomatic welding power, welding equipment, welding equipment component, welding technology / PGSh-5 semiautomatic CO sub 2 shielded welding machine, PGSh-5 semiautomatic CO sub 2 shielded welding machine

ABSTRACT: Considering the diversity of the work parts welded by the CO₂-shielded method, a large number of different units of welding apparatus and equipment is needed for this purpose. In this connection, the author describes a set of standardized components (Fig. 1) which can be assembled together as needed for the semiautomatic CO₂ shielded welding machines designed by the TsNIITMASH Central Scientific Research Institute of Technology and Machine Building. Thus, e.g. depending on the type and position of the seams, the rigidity of electrode wire, and the welding conditions, either a gun-type or a burner-type holder has to be used. If considerable depth of fusion is required, a fitting assuring minimal overhang of electrode wire is needed.

Cord 1/5

UDC: 621.791.85.037

419
48
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L.9661-66

ACC NR: AP5027608

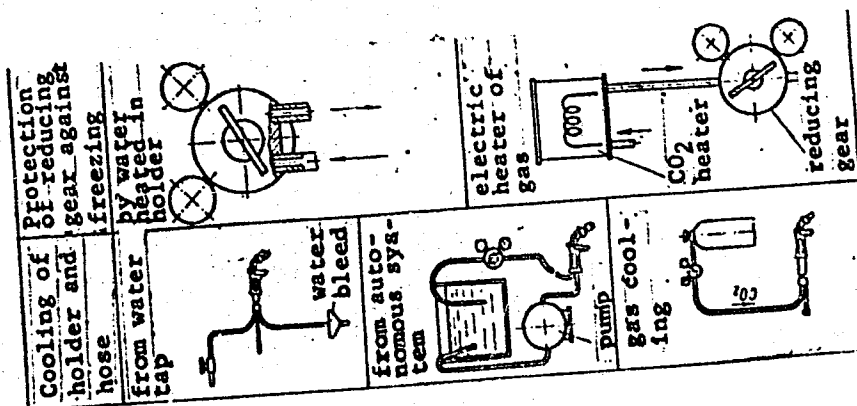


Fig. 1, b. Variants of accessories for TsNIITMASH-designed standardized semiautomatic welding machines

3/5

L 9661-66

ACC NR: AP5027608

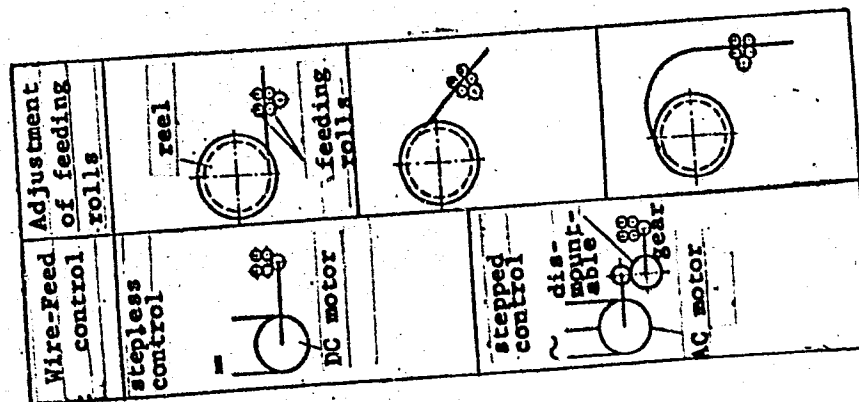


Fig. 1, c. Variants of accessories for TsNIITMA Sh-designed standardized semiautomatic welding machines

L 9661-66

ACC NR: AP5027608

High-speed welding requires water cooling of the current-conducting hose and holder fitting. Precision welding requires use of an adjustable-RPM DC motor to drive the electrode-feed mechanism. In addition, two basic modifications of the semiautomatic welding machine are needed in virtually any type of large-scale welding operations: a machine with a smoothly adjustable electrode feeding rate that is dependent on the arc voltage, and a machine with an independent electrode feeding system. Accordingly, the TsNIITMASH has designed two standardized semiautomatic machines of this kind: the PGSh-4M and the PGSh-5. The PGSh-4M makes it possible to use electrode wire of 1.6 and 2.0 mm diameter for low-voltage welding, and thus helps to save scarce electrode wire of smaller diameters, while the PGSh-5 can be used for regular welding operations which do not require frequent changes of welding regime. Orig. art. has: 2 figures, 1 table.

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 000/ OTH REF: 000

5/5

DeBRUSHIN, M.Sh.

135-6-10/13

SUBJECT: USSR/Welding

AUTHORS: Kasprzhak, G.M., Candidate of Technical Sciences, and Debrushin, M.Sh., Engineer.

TITLE: The Problem of Switching-Off Welding Transformers during Idle Run. (K voprosu ob otklyuchenii svarechnykh transformatorov pri kholostem khode).

PERIODICAL: "Svarechnoye Proizvodstvo", 1957, # 6, pp 24-26 (USSR)

ABSTRACT: The authors question the expediency of systems for switching off welding transformers for the duration of idle interval during work. Though there are many such systems in existence and there are descriptions of them (3) (4), they are not widely used and they are not being produced by the electrical industry. Many technicians continue to work on the problem, the number of suggestions is growing, but no technical and economic analysis of this actually simple problem has yet been made and the question remains open.

One of the most successful transformer switch-off systems (which is shown in diagram in the article) has been developed by "TsNILEPS".

Card 1/2

135-6-10/13

TITLE: The Problem of Switching-Off Welding Transformers during Idle Run. (K voprosu ob otklyuchenii svarochnykh transformatorov pri kholostem khode).

The authors consider as impractical the application of such special devices, since their initial cost is relatively high- nearly 12 times higher than of the static condensers- and with the electricity rates for industry of 8 kopeks/kwh, the amortization would take nearly 27 years, even if repair and operating costs were not taken into account. The use of switch-off systems with the purpose of increasing power coefficient, and safety, would be inexpedient as well.

The article contains 2 electrical diagrams and 11 bibliographic references (all of which are Russian).

ASSOCIATION: Laboratoriya elektricheskikh svarochnykh mashin AN SSSR
(Electric Welding Machines Laboratory USSR Academy of Sciences.

PRESENTED BY:

SUBMITTED:

AVAILABLE: At the Library of Congress.

Card 2/2

S/193/60/000/012/005/018
A004/A001

AUTHOR: Dobrushin, M. Sh.

TITLE: The Multipurpose BCK (VSK) Welding Rectifiers.

PERIODICAL: Byulleten' tekhniko-ekonomicheskoy informatsii, 1960, No. 12, pp.18-19

TEXT: The Tsentral'naya nauchno-issledovatel'skaya laboratoriya elektricheskoy obrabotki materialov (TsNII-ELEKTROM) AN SSSR (Central Scientific Research Laboratory of Electric Tooling of Materials of the AS USSR) has designed the VSK series of welding rectifiers, i. e. the models VSK-150, VSK-300 and VSK-500, whose principal technical data are presented by the author in the following table:

Table:

1 - idle-run voltage, in volts;
2 - regulation range of working

Card 1/3

Показатели	Выпрямители		
	BCK-150	BCK-300	BCK-500
1. Напряжение холостого хода, в . . .	70	70	70
2. Пределы регулирования рабочего напряжения, в	17-23	14-34	26-38
3. Номинальный ток при $\eta = 65\%$, а	150	300	500
4. Пределы настройки тока, а	50-200	75-400	125-675
5. К. п. д., %	67	75	76
6. Коэффициент мощности	0.82	0.82	0.82
7. Вес активных материалов, кг . . .	72	135	178

S/193/60/000/012/005/018
A004/A001

The Multipurpose BCK(VSK) Welding Rectifiers

voltage, v; 3 - rated current at 65% duty cycle, amp; 4 - current adjustment range, amp; 5 - efficiency, in %; 6 - power coefficient; 7 - weight of active materials, kg.

The rectifiers possess rigid (sloping-falling) external characteristics with increased voltage of the idle run. Owing to the use of an ignition device and a stabilizing choke, the VSK rectifiers are multi-purpose feed sources of the welding arc during automatic or semi-automatic gas-shielded arc welding with consumable electrodes, as well as during manual arc welding. The feed unit of the VSK rectifiers is composed of five transformers: a three-phase main power transformer; a three-phase booster transformer and three single-phase booster transformers. The secondary windings of the main transformer are star-connected, while the secondary windings of the booster transformers are connected in series to the secondary windings of the main transformer. The rectifiers possess 20 regulation stages, each of 0.5 - 0.6 v. The rough adjustment of voltage is effected with the 90-53 (UP-53)-type switch and three low-power -41 (EP-41) relays. Stepless adjustment is carried out with the 12-circuit UP-53 switch which effects the serial switching over of the primary windings of the single-phase booster transformers. The selenium rectifier unit is composed of 2 blocks, i. e. the main rectifier and the auxiliary low-power rectifier. The stabilizing

Card 2/3

The Multipurpose BCK(VSK) Welding Rectifiers

S/193/60/000/012/005/018
A004/A001

unit consists of the ignition device and the stabilizing choke. The main function of the stabilizing choke is to ensure an optimum electromagnetic time constant of the welding circuit, during which the dynamic properties of the rectifier correspond to the requirements of the welding process. In the circuit of the VSK rectifiers two lead-outs are provided for the sectionalizing of the choke winding, one with a lower number of winding turns for gas-shielded electric welding and the other for manual arc welding. A test lot of VSK-300 rectifiers will be brought out by the Dnepropetrovskiy zavod selenovyykh vypryamiteley (Dnepropetrovsk Selenium Rectifier Plant) in the fourth quarter of 1960. There is 1 figure and 1 table.

Card 3/3

S/135/62/000/007/001/010
A006/A101

AUTHORS: Kashurnikov, Yu. M., Dobrushin, M. Sh., Engineers

TITLE: Optimum welding circuit parameters during welding in carbon dioxide with periodic short-circuit of the arc

PERIODICAL: Svarochnoye proizvodstvo, no. 7, 1962, 5 - 8

TEXT: The authors analyze the effect of the welding circuit inductance on metal spattering and the quality of joints during welding in CO₂. A method is given to determine the optimum time constant of the welding circuit and the inductance of a single-inertia power source. An equation is presented to calculate these values from the given optimum mean rate of increment of trickle short-circuit current, depending on the slope of the static external characteristic of a single-inertia power source K_S and parameters U_{av}, I_{av} in a process with periodic short circuit:

$$T_c = t_{sh.c} \left[\ln \frac{U_{av}K_S + I_{av} - I_{min}}{U_{av}K_S + I_{av} - I_{min}(U_{av}K_S + I_{av} - I_{min}) \left(1 - e^{-\frac{t_{sh.c}}{T_c}} \right)} \right]^{-1} \quad (5)$$

Card 1/2

Optimum welding circuit parameters...

S/135/62/000/007/001/010
A005/A101

When the optimum time constant is known, the welding circuit inductance can be determined by equation (6):

$$L = T_c R_s = \frac{T_c}{K_s}$$

R_s is the full active resistance of the whole circuit. The optimum inductance of the welding circuit with a single-inertia power source (generators with independent excitation and rectifiers without feed-back) at a coefficient of the rigid external characteristic $K_s = 20 \text{ a/v}$ and more, does practically not depend on the rigidity of the external characteristics and, consequently, also on the active resistance of the welding circuit elements. Optimum inductance for each parameter of the electrode wire has a fully determined value and increases with a greater wire diameter. A single-inertia power source when welding in CO_2 should be designed with controlled inductance, assuring steps $L = (2; 3.5; 6; 9.5) \times 10^{-4} \text{ hy}$ respectively for wires of 1; 1.2; 1.6 and 2 mm in diameter. There are 4 figures and 3 tables.

ASSOCIATION: TsNIITMASH

Card 2/2

KASHURNIKOV, Yu.M., inzh.; DOBRUSHIN, M.Sh., inzh.

Optima parameters of the arc welding circuit for welding in an atmosphere of carbon dioxide with periodic short-circuiting of the arc. Svar.proizv. no.7:5-8 J1 '62. (MIRA 15:12)

1. Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya.

(Electric welding) (Protective atmospheres)

S/052/63/008/001/003/005
B112/B186

AUTHOR: Dobrushin, P. L. (Moscow)

TITLE: The asymptotic optimum properties of group and systematic codes for some channels

PERIODICAL: Teoriya veroyatnostey i yeye primeneniya, v. 8, no. 1, 1963, 52 - 66

TEXT: Stationary channels without memory are considered, the symbols $E_1, \dots, E_M$ of which are letters of the alphabet of the channel. It is assumed that M is an integral power of a prime number, that $E_1, \dots, E_M$ are the elements of a commutative group, and that the transition probability from E_i to E_j coincides with the transition probability from $E_i + E_k$ to $E_j + E_k$ for all indices, i, j, k . The minimum probability of error for all the codes is proved to be asymptotically equal to the minimum probability of error for all the group codes, if the transmission rate is large enough. Some other similar results are also obtained.

SUBMITTED: February 2, 1961

Card 1/1

S/020/63/148/006/002/023
B112/B186

AUTHOR: Dobrushin, P. L.

TITLE: Unified methods for the transmission of information through discrete channels without memory and for communications with independent components.

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 148, no. 6, 1963, 1245-1248

TEXT: The results of D. Blackwell, L. Breiman, A. J. Thomasian (Ann. Math. Stat., 29, 1223 (1959), 31, 558 (1960)), C. E. Shannon (IRE Conv. Rec., 7, 142 (1959)), and for a more general case by the author (Proc. Fourth Berkl. Symp. on Math. Stat. and Prob., 1, 1961, p. 211, UMN, 14, no. 6, 3 (1959)) are derived from a unified point of view.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

PRESENTED: August 31, 1962, by A. N. Kolmogorov, Academician

SUBMITTED: August 4, 1962
Card 1/1

DOBRUSHIN, R., doktor fiziko-matematicheskikh nauk; KONDRATOV, A.

"Lincos" by Hans Freudenthal. Reviewed by R. Dobrushin,
A. Kondratov. Znan.-sila 37 no.7:10-12 JI '62. (MIRA 15:9)
(Astronautics--Communication systems)
(Semantics (Philosophy))
(Freudenthal, Hans)

USSR/Mathematics - Markov Processes Nov/Dec 52

"Conditions Governing the Regularness of Uniform-in-Time Markov Processes With Denumerable Number of Possible States," R. L. Dobrushin

"Usp Matemat Nauk" Vol 7, No 6 (52), pp 185-191

Surveys the earlier results obtained by N. Arley ("Theory of Stochastic Processes," New York, 1948, pp 1-240), J. Doob ("Markoff Chains - Denumerable Case," Trans Am Math Soc, 58, 3, 1945, 455-473), W. Feller ("Integro-Differential Equations of the Purely Discontinuous Markoff Processes," Trans Am Math Soc, 48, 3, 1940, 488-510), and A.N. Kolmogorov.

243T85

Establishes the connection between continuous process and discrete Markov chain. Finds necessary and sufficient conditions for regularness in one partial case.

243T85

PA 243T85

DOBUSHIN, R. L.

DOBRUSHIN, R. L.

USSR/Mathematics - Probability, Markov Chains Jul/Aug 53

"Limit Theorems for the Markov Chain of Two States,"
R. L. Dobrushin

Iz Ak Nauk SSSR, Ser Mat, Vol 17, No 4, pp 291-330

Exhaustively describes the limit distributions for the number of coincidences in one of the states which is a homogeneous Markov chain of two states. Thanks his teacher, Acad A. N. Kolmogorov, for proposing to him this task and guiding him in its solution. Submitted by Acad A. N. Kolmogorov, 6 Dec 52.

274764

DOBUSHIN, R. L.

Mathematical Review.
June 1954
Analysis

10-5-54 LL

Dobrušin, R. L. Generalization of Kolmogorov's equations for Markov processes with a finite number of possible states. Mat. Sbornik N.S. 33(75), 567-596 (1953). (Russian)

If I is a finite open, semiclosed, or closed interval, let $P(I)$ be an r -dimensional square matrix. If it is supposed that to the null interval ϕ corresponds the identity matrix E , and that $P(I_1 \cup I_2) = P(I_1)P(I_2)$, for disjunct intervals I_1, I_2 , then the function P is called multiplicative. An additive function of intervals is defined in the corresponding way, making the null matrix correspond to the null interval. It is supposed in each case that (*) if $I_1 \supset I_2 \supset \dots$, and if $\bigcap I_n = \phi$, then the function value at I_n goes to that for the null interval. The norm $\|A\|$ of a matrix $A = (a_{ij})$ is defined as $\max_{i,j} |a_{ij}|$. A matrix function Q of intervals is said to have bounded variation on an interval if $\sup \sum \|Q(I_i) - Q(\phi)\|$ (for all decompositions of the interval) is finite. The following results are proved. To each multiplicative [additive] matrix function $P [B]$ of bounded variation on an interval, satisfying (*), there corresponds an additive [a product] integral, defined as a limit of terms of the form $\sum \{P(I_i) - E\} [\prod \{E + B(I_i)\}]$. The integral defines, on subintervals of the given interval, an additive [a multiplicative] matrix interval function satisfying (*) and of bounded variation. Moreover the inverse operation of either type of integration is the other type. These results are specialized to the case of

Dobrušin, R. L.

①

multiplicative stochastic matrix functions defined in the obvious way by Markov chains, and the corresponding (infinitesimal) additive matrix functions. Under slightly stronger hypotheses (absolutely continuous case) the clas-

sical differential equations satisfied by the elements of multiplicative matrix functions are obtained.

J. L. Doob (Urbana, Ill.).

USSR/Mathematics - Markov Processes

FD-834

Card 1/1 : Pub. 64 - 9/10

Author : Dobrushin, R. L. (Moscow)

Title : Conditions for the regularity of Markov processes with a finite number of possible states

Periodical : Mat. sbor., 34(76), 541-556, May-Jun 1954

Abstract : The purpose of the article is to find the necessary and sufficient conditions, expressed in matrices of the probability of transfer of state of a system, that the random function corresponding to a process make with probability unity only a finite number of jumps. This can be expressed as finding conditions for the regularity of the process. States that the problem had been posed by A. N. Kolmogorov, who helped the author considerably. Also thanks Ye. B. Dynkin.

Institution : --

Submitted : July 14, 1953